

**IN THE CLAIMS:**

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~strikethrough~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

1. (previously presented) An apparatus that supports a validation of a target apparatus including a plurality of functional devices by generating an input/output sequence for the target apparatus, comprising:

a first input unit for inputting functional configuration information on the functional devices and connections among the functional devices;

a second input unit for inputting a condition for the input/output sequence;

a first generating unit that generates a validation item function based on the functional configuration information and the condition;

an extracting unit that extracts a combination of functional devices as a validation item, from the validation item function; and

a second generating unit that generates the input/output sequence based on the validation item.

2. (previously presented) The apparatus according to claim 1, wherein the validation item function is expressed by a binary decision diagram.

3. (previously presented) The apparatus according to claim 1, wherein the condition includes a resource constraint condition for the functional devices.

4. (previously presented) The apparatus according to claim 1, wherein the condition includes a condition that limits the functional devices to be included in the validation item.

5. (previously presented) The apparatus according to claim 1, wherein the extracting unit extracts a plurality of validation items based on a priority of each of the validation items, the priority being calculated based on a priority assigned to each of the functional devices.

6. (currently amended) The apparatus according to claim 1, wherein the extracting unit extracts  $n$  or less validation items, where  $n$  or less validation items extracted is a positive integer larger than one.
7. (previously presented) The apparatus according to claim 1, further comprising: a converting unit that converts a functional block diagram of the target apparatus into a graph including a plurality of nodes and a plurality of edges, wherein the graph is input to the apparatus as the functional configuration information.
8. (previously presented) The apparatus according to claim 1, further comprising: a third input unit for inputting a validation environment that defines a flow of data that is input to and output from the target apparatus, wherein the second generating unit that generates the input/output sequence, based on the validation environment and the validation item.
9. (previously presented) The apparatus according to claim 1, wherein the apparatus is connected, via a network, to an information terminal from which the functional configuration information and the condition are input and to which the validation item and the input/output sequence are output.
10. (previously presented) The apparatus according to claim 8, wherein the apparatus is connected, via a network, to an information terminal from which the functional configuration information, the condition, and the validation environment are input and to which the validation item and the input/output sequence are output.
11. (currently amended) A computer-readable storage ~~recording medium~~ that stores therein a computer program for supporting a validation of a target apparatus including a plurality of functional devices by generating an input/output sequence for the target apparatus wherein the computer program causes a computer to execute:
- receiving an input of functional configuration information on the functional devices and connections among the functional devices;
  - receiving an input of a condition for the input/output sequence;
  - generating a validation item function, based on the functional configuration information and the condition;

extracting a combination of functional devices as a validation item, from the validation item function; and  
generating the input/output sequence based on the validation item.

12. (previously presented) A method for supporting a validation of a target apparatus including a plurality of functional devices by generating an input/output sequence for the target apparatus, comprising:

inputting functional configuration information on the functional devices and connections among the functional devices;  
inputting a condition for the input/output sequence;  
generating a validation item function, based on the functional configuration information and the condition;  
extracting a combination of functional devices as a validation item, from the validation item function; and  
generating the input/output sequence based on the validation item.

13. (previously presented) A method for supporting a validation of a target apparatus including a plurality of functional devices by generating an input/output sequence for the target apparatus, comprising:

generating a validation item function based on input of functional configuration of the target apparatus and input of a condition of the input/output sequence; and  
generating the input/output sequence based on a combination of functional devices extracted from the validation item function and validation costs associated with the functional devices extracted.

14. (new) A method supporting a validation of a target apparatus including a plurality of functional devices by generating an input/output sequence for the target system, comprising:

generating a validation item function based on the functional configuration information and a condition of the input/output sequence; and  
generating the input/output sequence based on the validation items extracted from a combination of functional devices, the validation items based on a cost of each of the validation items.